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U.S. Army Corps of Engineers Environmental Review Guide for Operations (ERGO) Cycle I Assessment

Reports Analysis

by
Diane K. Mann

The U.S. Army Corps of Engineers is pro-active in responsible environmental management of its operations, which include navigation locks, dams, hydroelectric power plants, dredges, campgrounds, marinas, oil and gas well drilling facilities, forests, and grazing lands. A comprehensive system, Environmental Review Guide for Operations (ERGO), was developed to achieve, maintain, and monitor compliance with environmental laws and regulations. ERGO provides managers with an accurate picture of compliance levels and corrective action required as well as providing guidance for wise stewardship.

Cycle I of ERGO established a baseline for future environmental compliance assessments. Reports generated during Cycle I were analyzed to evaluate the assessment process, identify strengths and weaknesses, comment on productivity, and suggest improvements for succeeding ERGO Cycles. A method was devised to evaluate finding write-ups, rating of findings, corrective actions, and report content. This study identified specifics, magnitude, and universality of problems. These problems can be addressed by organizational policy, revised guidance, commitment to tracking corrective actions, and specific training to improve future ERGO cycles. Analytic methods used for ERGO Cycle I have potential for broader application to other organizations seeking insight into their programs.

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The U.S. Army Corps of Engineers is pro-active in responsible environmental management of its operations, which include navigation locks, dams, hydroelectric power plants, dredges, campgrounds, marinas, oil and gas well drilling facilities, forests, and grazing lands. A comprehensive system, Environmental Review Guide for Operations (ERGO), was developed to achieve, maintain, and monitor compliance with environmental laws and regulations. ERGO provides managers with an accurate picture of compliance levels and corrective action required as well as providing guidance for wise stewardship.

Cycle I of ERGO established a baseline for future environmental compliance assessments. Reports generated during Cycle I were analyzed to evaluate the assessment process, identify strengths and weaknesses, comment on productivity, and suggest improvements for succeeding ERGO Cycles. A method was devised to evaluate finding write-ups, rating of findings, corrective actions, and report content. This study identified specifics, magnitude, and universality of problems. These problems can be addressed by organizational policy, revised guidance, commitment to tracking corrective actions, and specific training to improve future ERGO cycles. Analytic methods used for ERGO Cycle I have potential for broader application to other organizations seeking insight into their programs.

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Executive Summary

Introduction

The U.S. Army Corps of Engineers takes a pro-active approach to achieving and maintaining compliance with environmental laws and regulations at the diverse projects and facilities it manages throughout the United States. The Corps Civil Works organization operates and maintains navigation locks, dredges, flood damage reduction dams and levees, hydroelectric power plants, public picnic areas, beaches, campgrounds, and other facilities. In addition, the Corps oversees the operation of marinas, oil and gas extraction facilities, timber harvests, agricultural operations, and various activities conducted by others on Corps-managed properties. The Corps has an environmental compliance assessment program founded on periodic project and facility assessments using the Environment Review Guide for Operations (ERGO), a comprehensive checklist of Federal and Corps environmental laws and regulations. ERGO assessments provide project and facility managers with a picture of their compliance status and identify corrective actions required. ERGO Cycle I assessments were conducted at all projects and facilities during the FY91 through FY94 period.

Analysis Objectives

The objective of this analysis is to evaluate sample ERGO Cycle I assessment and correction action reports from throughout the Corps to identify process and product strengths and weaknesses to make recommendations that will improve the consistency and effectiveness of succeeding ERGO Cycles.

Analysis Results

The Corps took a major step forward in environmental management when it implemented the ERGO environmental compliance assessment program. Training, commitment, and extra hard work by assessors led to successful completion of ERGO Cycle I assessments. ERGO Cycle I substantially improved the Corps compliance status, increased environmental awareness throughout

the organization, and established a baseline for future assessment cycles. Although especially outstanding in assessing water quality, pesticides, and natural resources, several issues require additional attention. Some compliance assessments lack consistency in reporting, scoring, prioritizing, and correcting findings of noncompliance. Successful evolution of the ERGO process during Cycle I reflects positively on the initiative and hard work of personnel assigned the formidable task of starting a major program. Correction of issues suggested in the analysis should improve budget planning and identification of root causes of noncompliance. Future assessment cycles can be expected to increase the return on resource expenditures for assessments and continue to reduce occurrences of noncompliance with environmental regulations.

Summary of Recommendations

It is recommended that the Corps of Engineers establish minimal policy and guidance necessary to improve the consistency of the ERGO process, but continue to avoid an elaborate reporting process. The organization should demonstrate a commitment to tracking corrective actions until their completion to decrease vulnerability from outside inspections, enforcement actions, and negative publicity. Future training should concentrate on weaknesses identified that should have positive results in the field and for ERGO Cycle II. All recommendations from this analysis are listed on the following pages.

List of Recommendations

1. Attention to writing condition(s) observed for a finding should continue to focus on clarity and factual information.

2. Finding conditions should include sample size, descriptions of amounts, and other indicators of the extent of the condition of noncompliance.

3. Designated team chief of the ERGO assessment team should stress the importance of sufficient information in finding conditions and check early in the assessment to see if appropriate information is being included.

4. Instructions to assessors should stress the importance of entering specific site locations on finding sheets.

5. Every finding of noncompliance should include citation(s) of statutory/ regulatory criteria used as the basis for the finding.

6. Every finding of noncompliance should include pertinent text of statutory/ regulatory citation used as the criterion or, if too lengthy, a paraphrase to illustrate the reason for the finding.

7. If the criteria has more than one citation, the text of citation with greatest priority should be included in its entirety, or should be well paraphrased.

8. Policy should be established as to priority assigned to criteria, such as: (a) Federal regulation, (b) State regulation, (c) Engineering regulation, (d) DOD Directive, (e) Engineering Manual, or some other similar scheme.

9. Continue the practice of soliciting optional comments.

10. Emphasize the value added to the assessment for project/facility managers when comments give specific directions, provide advice, and share expertise.

11. The designated team chief of an ERGO assessment team should check for any pattern of errors and try to assist team members needing guidance early in the assessment.

12. Policy decision should be made on maintaining or discarding the practice of using Engineering Manuals as criteria for noncompliance findings.

13. The seriousness of rating should be thoroughly and clearly supported in the finding condition.

14. The ERGO team chief should check for consistency in application of the rating system.

15. Special attention should be applied to rating hazardous waste, solid waste, and wastewater findings during training sessions.

16. Guidance should be issued emphasizing the seriousness of a significant rating and importance of a strong, clear, supporting condition.

17. Training should address the responsible use of a significant rating and provide examples.

18. Training and instructions to assessment teams should stress conditions necessary to warrant a rating of "Major."

19. Policy should be established defining the use, reporting, and treatment of a "Good Management Practice" (GMP).

20. Corrective actions for significant, major, and minor findings of noncompliance should take precedence over devoting time and resources to implementing GMPs.

21. Training and instructions to ERGO assessment teams should stress unique attributes of a GMP that distinguish it from a regulatory finding of noncompliance.

22. Positive findings should be an integral part of ERGO assessments.

23. Training and instructions should cover standards for awarding positive ratings to ensure their correct and consistent use.

24. Positive findings should not be rated.

25. New rating categories should be prohibited unless approved by HQUSACE.

26. Firm policy should be issued stating that every finding of noncompliance must have a corrective action that is tracked until compliance is achieved.

27. If completed, corrective action closing date should be stated.

28. Projected completion date should be provided for ongoing and in-progress corrective actions.

29. Corrective actions scheduled for completion over 2 years in the future should contain sufficient information to justify protraction.

30. Policy should be established that specifies who had authority to determine that no corrective action is necessary because this determination voids an assessors finding of noncompliance.

31. At a minimum, report covers should identify ERGO, project or facility name, and district.

32. Date(s) on report should be identified as to stage in ERGO process.

33. Well designed finding sheets could be used as the report section/chapter on findings of noncompliance because this has been successfully demonstrated to be an efficient format.

34. Corrective actions should be incorporated on the finding sheet.

35. Assign responsibility for corrective actions using impersonal office designations.

36. Include at least one Corps person on a contract assessment team, if possible.

37. Evaluation and monitoring of contractor assessments should discourage "quantity," which is repetitious and tends to obscure priorities for corrective action.

38. Labeling and description of photographs should be required to justify time and expense invested in them.

Foreword

This study was conducted for the Directorate of Civil works, Headquarters, U.S. Army Corps of Engineers (HQUSACE), under Funding Acquisition Document (FAD) 3123-950807398, Work Unit LM5, "ERGO Cycle I Assessment Process Review." The technical monitor was Mr. James Wolcott, CECW-OA.

The work was performed by the Planning and Mission Impact Division (LL-P) of the Planning and Management Laboratory (LL), U.S. Army Construction Engineering Research Laboratories (USACERL). The USACERL principal investigator was Dr. Diane K. Mann. Dr. Harold E. Balbach is Chief, CECER-LL-P; Dr. William D. Severinghaus is Operations Chief, CECER-LL; and William D. Goran is the responsible Technical Director, CECER-LL. The USACERL technical editor was William J. Wolfe, Technical Resources.

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Background

The ERGO program began with the creation of a steering committee of project, district, and division operational personnel in 1990. A series of working meetings were held to develop a manual for managers to use to ensure compliance of their facilities and projects with Federal, Corps, State, and local environmental laws and regulations. The core of the ERGO program is project and facility evaluations identifying strengths, weaknesses, and specific problems at operational projects and facilities. ERGO Cycle I compliance assessments were performed Corps-wide using a variety of assessment team configurations (district teams, district/division teams, project teams, and contractors) and the ERGO manual as the basis for identifying exceptional performance as well as deficiencies, issuing reports, and developing corrective actions plans (CAPs). The completion of Cycle I offers an opportunity to evaluate the ERGO process.

Objectives

The objectives of this analysis were: (1) to evaluate a sample of ERGO Cycle I assessment and correction action reports from throughout the Corps to identify process and product strengths and weaknesses, and (2) to make recommendations that will improve the consistency and effectiveness of succeeding ERGO Cycles.

Approach

In a memo dated 9 June 1995, Mr. Dan Burns, Chief, Operations, Construction and Readiness Division, Directorate of Civil Works asked that at least one ERGO report and corrective action plan from each district be sent to USACERL for analysis. ERGO reports received were grouped according to year assessment was performed (Tables 1-4).

Table 1. 1991 ERGO reports.

District	Projects and Facilities	Date
Huntington	John W. Flannagan Dam and Reservoir	Jun 12-13
Little Rock	Russelville Resident Office and Marine Terminal	
	Dardanell Project Office, Powerhouse and Lock/Dam	Jun 17-20
Tulsa	Oologah Project/Office/Facility	Sep 2-4
Galveston	Brazos River Floodgates	Sep 11
Albuquerque	Abiquiu Lake	Oct 24 - Nov 13
Baltimore	Raystown Lake	Dec 12
Little Rock	Millwood, DeQueen, Dierks and Gilham Project Offices and Compounds	Dec 17-19

Table 2. 1992 ERGO reports.

District	Projects and Facilities	Date
Tulsa	Keystone Lake	Feb 4
Jacksonville	Lake Okeechobee and Waterway	Mar 9-13
Detroit	Soo Area Office	Apr 13-15
Wilmington	B. Everett Jordan Lake	Apr 13-16
Vicksburg	Arkabutla Lake and Field Office	May 11
Louisville	Taylorsville Lake	May 12
Los Angeles	Alamo Lake	May 12-14
St. Paul	Eau Galle Lake	May 19-20
New Orleans	Algiers Lock	May 22
Pittsburgh	Allegheny River Lock and Dam 2	Jul 8
Memphis	Graham Burke Pumping Plant	Jul 16
Savannah	J. Strom Thurmond Project	Sep 14-18
Charleston	Cooper River Rediversion Project	Dec 2

Table 3. 1993 ERGO reports.

District	Projects and Facilities	Date
Walla Walla	Dworshak Project	May 3-7
Fort Worth	Lavon Lake	May 20-21
Sacramento	Pine Flat Lake	Jul 21-22
Mobile	Walter F. George and George W. Andrews Lakes	Aug 23-27
Chicago	Chicago River and Harbor	Fall

Table 4. 1994 ERGO reports.

District	Projects and Facilities	Date
Nashville	Old Hickory Project	Mar & Apr
Kansas City	Pomme De Terre	Mar 8-11
Rock Island	Peoria Lock and Dam	Mar 30
Seattle	Puyallup Levee	Apr 11
Buffalo	Mount Morris Dam	May 17 - Sep 20
Omaha	Papillion Creek Lakes and Dams	May 24-25
St. Louis	Wappapello Lake	Jul 11-18
Pittsburgh	Youghiogheny Lake	Sep
Portland	U.S. Moorings and Logistics Management Warehouse	Nov 21-22

A random sample of reports, including at least one from each year, were given a cursory reading to design an evaluation system that encompassed elements common to all reports over the 4-year period represented (Appendix A). Some elements were examined in terms of "poor," "satisfactory," and "exceptional." Other elements were examined according to a range of specifics relative to a finding write-up of a condition on noncompliance such as various forms of insufficient information. A coding system was devised to record the specifics used to judge each element (Appendix B). Emphasis was placed on various aspects of the findings (condition statement, criteria, and comments) as reflected in the evaluation design.

Findings were tabulated by protocol section for each year to permit comparisons on different configurations such as an overview for each year, protocol totals of selected elements and specific trends over 4 years in all protocols. Basic yearly totals include total negative findings (indicating noncompliance) and total positive findings (which exceed requirements) (Tables 5 to 8).

Yearly totals for all findings, negative findings, positive findings, and their percentages were added (Tables 9 and 10) to indicate the scope of this study. A total of 100 reports from 31 districts were examined. Individual reports for outgrants that were part of a large project were part of the total of 100 reports. Majority of reports (47) were submitted for 1992 assessments. Reports submitted from 1993 totaled 22 and from 1994 totaled 21. Assessment reports from 1991 totaled 10 and included the fewest outgrants.

A total of 1,745 findings were evaluated. However, some tables are based on a total of 1,657 findings because some reports did not include needed information for findings to be analyzed for inclusion in tables addressing specific qualities.

Table 5. Finding Totals 1991.

Protocol	Total Findings	Total Negative	Total Positive
Air emissions	13	11	2
Cultural resources	17	17	0
Hazardous materials	47	44	3
Hazardous waste	22	21	1
Natural resources	16	14	2
Pesticides	17	16	1
Petroleum oils lubricants	47	41	6
Solid waste	24	23	1
Special pollutants	12	11	1
Underground storage tanks	18	17	1
Wastewater	18	15	3
Water quality	13	13	0
Total	264	243	21

Table 6. Finding totals 1992.

Protocol	Total Findings	Total Negative	Total Positive
Air emissions	31	30	1
Cultural resources	52	51	1
Hazardous materials	163	152	11
Hazardous waste	94	88	6
Natural resources	70	65	5
Pesticides	109	103	6
Petroleum oils lubricants	127	116	11
Solid waste	69	68	1
Special pollutants	26	22	4
Underground storage tanks	20	19	1
Wastewater	53	52	1
Water quality	39	38	1
Total	853	804	49

Table 7. Finding totals 1993.

Protocol	Total Findings	Total Negative	Total Positive
Air emissions	10	10	0
Cultural resources	16	16	0
Hazardous materials	55	53	2
Hazardous waste	34	33	1
Natural resources	5	5	0
Pesticides	44	43	1
Petroleum oils lubricants	35	32	3
Solid waste	20	18	2
Special pollutants	8	8	0
Underground storage tanks	14	14	0
Wastewater	4	3	1
Water quality	5	5	0
Total	250	240	10

Table 8. Finding totals 1994.

Protocol	Total Findings	Total Negative	Total Positive
Air emissions	11	11	0
Cultural resources	22	22	0
Hazardous materials	76	71	5
Hazardous waste	36	33	3
Natural resources	25	18	7
Pesticides	33	33	0
Petroleum oils lubricants	72	69	3
Solid waste	32	27	5
Special pollutants	12	11	1
Underground storage tanks	22	21	1
Wastewater	19	13	6
Water quality	18	15	3
Total	378	344	34

Table 9. Cycle I findings totals 1991-1994.

Protocol	Total Findings	Total Negative	Total Positive
Air emissions	65	62	3
Cultural resources	107	106	1
Hazardous materials	341	320	21
Hazardous waste	186	175	11
Natural resources	116	102	14
Pesticides	203	195	8
Petroleum oils lubricants	281	258	23
Solid waste	145	136	9
Special pollutants	58	52	6
Underground storage tanks	74	71	3
Wastewater	94	83	11
Water quality	75	71	4
Total	1745	1631	114

Table 10. Total ERGO phase I findings examined.

Year	Total Findings	Total Negative	Percentage Negative	Total Positive	Percentage Positive
1991	264	243	92%	21	8%
1992	853	804	94%	49	6%
1993	250	240	96%	10	4%
1994	378	344	91%	34	9%
Total	1745	1631	93%	114	7%

2 Analysis of Finding Write-Ups

Finding Write-Ups

Evaluating report findings without benefit of being present on the site at the time of the assessment skews the study by omission because a study of unreported findings of environmental noncompliance cannot be attempted. However, this same factor increases objectivity in studying how findings were reported because of total focus on what is written. Most findings contained adequate information; a few findings stood out because they were exceptionally well written; and a few findings were severely flawed by misconceptions and incompleteness. An example of a finding summary sheet is provided in Appendix C.

Finding

Satisfactorily written finding conditions have improved during Phase I; exceptionally well written finding conditions are in a declining trend.

Background and Discussion

Every finding describes what the assessor observed, which is termed "condition." The condition is the statement of facts pertinent to the finding. The overall information presented in the condition of the finding and its clarity were evaluated as poorly written (information incomplete or unclear), satisfactorily written (description of observations adequate and clear), or exceptionally well written (information precise and demonstrating insight/expertise). A trend reflected in this evaluation was a decrease in well written findings; satisfactorily written findings increased and poorly written findings fluctuated a few percentage points (Table 11). It is possible that the large number of well written findings in 1991 reflects extra care and time devoted to writing, which decreased subsequently with rote and haste.

Table 11. Evaluation of finding write-ups.

Year	Satisfactory	Percent	Exceptional	Percent	Poor	Percent
1991	121	69%	50	28%	5	3%
1992	671	79%	105	12%	77	9%
1993	209	84%	37	15%	4	2%
1994	319	84%	44	12%	15	4%
Total	1320	80%	236	14%	101	6%

Protocols with the largest number of poorly written findings were Hazardous Waste (17 percent in 1992), Natural Resources (16 percent in 1992), and Pesticide (13 percent in 1992). All other protocols were 10 percent or less for all 4 years, as were the above mentioned for the other 3 years (Appendix D).

Protocols with the largest number of exceptionally well written findings were Natural Resources (64 percent in 1991), Cultural Resources (50 percent in 1991), USTs (50 percent in 1992), Water Quality (33 percent in 1991), Hazardous Materials (32 percent in 1991), and Hazardous Waste (32 percent in 1993) (Appendix E). Many protocols had percentages of well written findings as high as 30 percent for one of the years. The number of well written findings outnumbered poorly written ones 14 percent to 6 percent for the reports studied (Table 11). Two (Hazardous Waste and Natural Resources) of the three protocols in the group with the largest number of poorly written findings were also in the group with the largest number of well written findings in other years. No consistent pattern was exhibited.

Recommendation 1

1. Attention to writing condition(s) observed for a finding should continue to focus on clarity and factual information.

Finding

A few problems in writing finding conditions were universal.

Background and Discussion

Although evaluation for several possible shortcomings was part of the design for analysis (Appendix B), a single problem in the writing of finding conditions tended to clump to one or two reports and was not common to all districts over the entire span of ERGO Cycle 1. Because of this clumping, several problems

were tabulated under the general heading of insufficient information (Appendix F). Insufficient information includes lack of sample size when appropriate, lack of frequency of event when appropriate, lack of dimensions or concentration when appropriate, and unjustifiably combining several conditions into one finding. A major problem is the omission of sample size, which is critical to rating (for example, "improper labeling of drums of hazardous waste" could be two of two drums or two of 100 drums). With the exception of 1993, the trend is toward improved writing of finding conditions (Table 12).

Table 12. Findings with insufficient information.

Year	Total Negative Findings	Insufficient Information	Percentage
1991	167	32	19%
1992	804	142	17%
1993	240	55	23%
1994	347	53	15%

Recommendations 2 & 3

2. Finding conditions should include sample size, descriptions of amounts, and other indicators of the extent of the condition of noncompliance.

3. Designated team chief of ERGO assessment team should stress the importance of sufficient information in finding conditions and check early in the assessment to see if appropriate information is being included.

Finding

Locations for findings of noncompliance were not always specific enough.

Background and Discussion

Many findings lacked specific site locations necessary for follow up on corrective actions, regular management inspections, and succeeding environmental compliance assessments.

Recommendation 4

4. Instructions to assessors should stress the importance of entering specific site locations on finding sheets.

Finding

Criteria for finding of noncompliance were sometimes lacking or incomplete.

Background and Discussion

Every finding sheet includes space for the assessor to state the citation and its text, or a paraphrase of the text, that was used as the criterion for a finding of noncompliance (Appendix C). Criteria problems ranged from totally omitted, through incomplete, to poorly chosen or paraphrased. Sometimes the citation was missing, which meant the source could not be consulted for clarification. Inclusion of criteria is essential to the credibility and usefulness of the report, especially to management. Trend in criteria problems shows backsliding (Table 13). Computerized reporting should cure this problem by inserting the complete citation and criteria statement(s). In some cases, criteria from several sources were applicable and including everything would have been cumbersome. Perhaps all citations could be listed, but only the criteria of the regulation with highest priority were written out.

Table 13. Findings with criteria problems.

Year	Total Negative Findings	Number of Problems	Percentage
1991	167	35	20%
1992	804	45	5%
1993	240	14	6%
1994	347	43	12%

Protocols with the most consistent criteria problems over 4 years were Wastewater (19 percent), Cultural Resources (18 percent), and Underground Storage Tanks (13 percent) (Appendix G).

Recommendations 5, 6, 7, & 8

5. Every finding of noncompliance should include citation(s) of statutory/ regulatory criteria used as the basis for the finding.

6. Every finding of noncompliance should include pertinent text of statutory/ regulatory citation used as the criteria or, if too lengthy, a paraphrase to illustrate the reason for the finding.

7. If the criterion has more than one citation, the text of the citation with the greatest priority should be included in its entirety or should be well paraphrased.

8. Policy should be established as to priority assigned to criteria, such as: (a) Federal regulation, (b) State regulation, (c) Engineering regulation, (d) DOD Directive, (e) Engineering Manual, or some similar scheme.

Finding

Comments vary in usefulness.

Background and Discussion

Judging the caliber of environmental compliance assessments solely on the basis of written reports is difficult. One clue helpful to an evaluation is the quality of the comments written by the assessors on finding summary sheets. Comments are insights, advice, extenuating circumstances, and other optional information offered by the assessor on a voluntary basis. Caliber of comments tends to reflect on assessors writing them as to their experience, dedication, and value added.

All comments were separated into three groups: (1) no added value (stated obvious such as label unlabeled barrel), (2) useful (information demonstrated expertise and/or could assist site personnel in environmental management; and (3) poor (information was misleading or incorrect). Writing a comment on a finding is optional. Ideally, a comment would be written when an assessor had worthwhile information to impart. In 1991, 100 percent of the comments made for two protocols were useful and, by 1994, this had increased to four protocols (Table 14) based on an analysis of comments from all reports from 1991 to 1994.

Table 14. Useful comments.

Year of Assessment	Protocols With 100% Useful Comments
1991	Pesticide Management
	Underground Storage Tank Management
1993	Air Emission Management
	Wastewater Management
	Water Quality Management
1994	Air Emission Management
	Cultural Resources Management
	Natural Resources Management
	Water Quality Management

Evaluation of comments is even more indicative of assessment strengths and weaknesses if the percentage of useful comments for each protocol is examined over the 4-year period (Appendix H). Based on this data, ERGO Phase I assessments were strongest for sharing expertise in Water Quality Management

(84 percent), Pesticides Management (72 percent), and Wastewater (61 percent); weakest for providing expertise in Cultural Resources Management (47 percent), Hazardous Materials Management (45 percent), POL Management (43 percent), and Special Pollutants Management (31 percent).

Recommendations 9 & 10

9. Continue practice of optional comments.

10. Emphasize value added to the assessment for project/facility managers when comments give specific directions, provide advice, and share expertise.

Finding

There were inconsistencies in the use of finding sheets.

Background and Discussion

Occasionally, an assessor would be inconsistent in handling information on a finding sheet: a finding of noncompliance would be mixed into a general status report on the site; critical information about an issue of noncompliance would show up in the comment section; and criteria cited would be inconsistent with the finding.

Recommendation 11

11. The designated team chief of the ERGO assessment team should check for any pattern of errors and try to assist team members needing guidance early in the assessment.

Finding

Engineering Manuals (EMs) were used in some reports as the criteria to judge major and minor findings of noncompliance.

Background and Discussion

Most likely EMs contain instructions and methods developed in response to Federal, State, and local regulation. They may give useful information on

details, especially for equipment, that is helpful to the assessor and personnel being assessed to communicate specifics necessary for attaining compliance. On the other hand, information may be judged too far removed from the regulation process to be used as criteria for judging noncompliance and triggering the ERGO corrective action process. In the military, a technical manual may be cited or information included as additional guidance, but it is not the sole basis for a finding of noncompliance.

Recommendation 12

12. A policy decision should be made on maintaining or discarding the practice of using EMs as criteria for noncompliance findings.

3 Analysis of Rating of Findings

Ratings of Findings

USACE guidance has established two finding types: positive and negative. A positive finding is made when minimum requirements have been exceeded at a facility. Actions have been taken to enhance or protect the environment that are not required by regulations. In other instances, new technology or a novel approach for satisfying regulations may be recognized by the assessor and a positive finding may be written up to recognize this accomplishment and highlight it for others to adopt.

A negative finding is made when a violation of Federal, State, local, or engineering regulations is recognized and written up against a requirement stated in the ERGO manual. Each negative finding is rated according to the following system:

- *Significant*: A finding of noncompliance requiring immediate attention. Violation poses, or is likely to pose, a direct, serious, and immediate threat to human health, safety, or the environment.

- *Major*: A finding of noncompliance requires a remedial action to bring the deficiency into compliance, but not necessarily immediate action. Major deficiencies may pose a threat to human health, safety, or the environment.

- *Minor*: A finding of noncompliance usually administrative in nature. This category may also include temporary or occasional lapses of noncompliance that are not serious enough to be classified as major.

A Good Management Practice may be an organization policy or operating procedure that stems not from a regulatory requirement, but from organizational choice. Often it covers an issue/condition that is expected to be regulated in the near future, or that is wise management to improve.

Significant, major, and minor ratings in the reports were sorted according to most common criteria identified as the basis for findings of noncompliance: (1) Code of Federal Regulations (CFR), (2) Engineering Regulation (ER), (3) State regulation, and (4) Engineering Manual (EM) (Tables 15-17). Most ratings are based on CFR criteria, but minor ratings have a large percent (39 percent) based on ERs (Table 17). State criteria can be expected to increase beyond the modest representation in ERGO Phase I. For some ratings, criteria were not identified.

Table 15. Regulation criteria used as basis for significant ratings of noncompliance.

Year	Negative Findings	Significant Findings	CFR Basis	%	ER Basis	%	EM Basis	%	State Basis	%
1991	167	0	0	0%	0	0%	0	0%	0	0%
1992	804	11	8	73%	0	0%	0	0%	3	27%
1993	240	0	0	0%	0	0%	0	0%	0	0%
1994	347	21	11	52%	8	38%	2	10%	0	0%
Total	1558	32	19	59%	8	25%	2	6%	3	9%

Table 16. Regulation criteria used as basis for major ratings of noncompliance.

Year	Negative Findings	Major Findings	CFR Basis	%	ER Basis	%	EM Basis	%	State Basis	%
1991	167	60	43	72%	13	22%	2	3%	2	3%
1992	804	317	197	62%	75	24%	0	0%	45	14%
1993	240	93	80	86%	9	10%	2	2%	2	2%
1994	347	122	87	71%	28	23%	4	3%	3	2%
Total	1558	592	407	69%	125	21%	8	1%	52	9%

Table 17. Regulation criteria used as basis for minor ratings of noncompliance.

Year	Negative Findings	Minor Findings	CFR Basis	%	ER Basis	%	EM Basis	%	State Basis	%
1991	167	57	42	74%	12	21%	0	0%	3	5%
1992	804	436	213	49%	165	38%	0	0%	58	13%
1993	240	112	47	42%	61	54%	1	1%	3	3%
1994	347	139	81	58%	54	39%	0	0%	4	3%
Total	1558	744	383	51%	292	39%	1	0.1%	68	9%

Finding

Ratings were not always consistent or supported by conditions as described.

Background and Discussion

Team members are assigned protocols to assess according to their expertise and are expected to use the rating system as described. Final reports of rated findings are read and used by persons who never may have seen the site or have any familiarity with its operations. These readers may focus on summary tables of ratings, but finding information should always be present in the report that logically demonstrates why the rating was given. Consequently, ratings were evaluated and a record made of those that were questionable or unsupported by the condition described; those not recorded were considered justified by the condition as described (Appendix I). Ratings justified by the condition as described in the report greatly outnumbered the questionable and unsupported ratings. Benefit of the doubt should definitely go to the assessor for the questionable findings. Consequently, justifiable and questionable ratings were added and recorded as a percent of total findings (Table 18). Unsupported ratings cause concern, especially because of the increasing trend (Table 18).

Air Emissions, Hazardous Waste, Petroleum Oils Lubricants, Solid Waste, Special Pollutants, and Wastewater had numerous questionable and/or unsupported ratings in specific years (Table 19).

Table 18. Evaluation of finding ratings.

Year	Total Findings	Justifiable Ratings	Questionable Ratings	Rating Sum/ Findings	Unsupported Ratings	Unsupported/ Total Findings
1991	176	161	11	98%	4	2%
1992	853	702	122	97%	29	3%
1993	250	207	34	96%	9	4%
1994	378	294	42	89%	42	11%

Table 19. Protocols with largest percentage of problem ratings.

Protocol	Year	Questionable	%	Unsupported	%
Air emission	1993	7/10	70%		
Hazardous waste	1992	19/94	20%		
	1994			9/36	25%
Petroleum oils lubricants	1994	17/72	24%		
Solid waste	1992	16/69	23%		
	1994			7/32	22%
Special pollutants	1992	7/26	27%		
Wastewater	1993	1/4	25%		
	1994	5/19	26%	4/19	21%

Recommendations 13, 14, & 15

13. The seriousness of rating should be thoroughly and clearly supported in the finding condition.

14. The ERGO team chief should check for consistency in application of the rating system.

15. Special attention should be applied to rating hazardous waste, solid waste, and wastewater findings during training sessions.

Finding

The rating of "Significant" is the most misused rating.

Background and Discussion

Of the 32 Significant ratings (condition poses, or is likely to pose, a direct, serious, and immediate threat to human health, safety, or the environment), only six were judged to be justified by the described condition (Table 20). Examination of major ratings did not reveal that any of them were Significants incorrectly rated. Of the 589 major ratings, only two Water Quality conditions, as described, were questionable Significants.

Table 20. Significant rating problems.

Protocol	Number	Justified	%	Questionable	%	Not Supported	%
Air emissions	1					1	100%
Hazardous materials	2					2	100%
Hazardous waste	8	2	25%	1	13%	5	63%
Pesticides	3	1	33%	2	67%		
Petrol. oils lubricants	9	2	22%	2	22%	5	56%
Solid waste	3			2	67%	1	33%
Special pollutants	1			1	100%		
Wastewater	5	1	20%	1	20%	3	60%
Total	32	6	19%	9	28%	17	53%

Recommendations 16 & 17

1. Guidance should be issued emphasizing the seriousness of a significant rating and importance of a strong, clear supporting condition.

2. Training should address the responsible use of a significant rating and provide examples.

Finding

Some errors in ratings of major tend to be too severe and this trend appears to be increasing.

Background and Discussion

Most major and minor ratings appear to be correctly assigned. Ratings that are questionable or unsupported as described in the finding condition tend to err more in being too severe for major ratings (Table 21). This suggests conscientiousness occasionally may be excessive, especially in ratings for Air Emissions, Natural Resources, Solid Waste, and Special Pollutants protocols (Appendix J).

Minor ratings were especially well applied and balanced with only 1 percent unsupported for being severe and 1 percent for being lenient (Table 22).

Table 21. Possible errors in ratings of major.

Year	Total Major Ratings	Severity Questionable	Severity Unsupported	Percent Unsupported	Lenient	Percent Lenient
1991	60	7	0	0%	0	0%
1992	317	52	10	3%	2	0.6%
1993	93	20	9	10%	0	0%
1994	122	29	17	14%	0	0%
Total	592	108	36	6%	2	0.3%

Table 22. Possible errors in ratings of minor.

Year	Minor Ratings	Severity?	Severity Unsupport.	Percent Unsupport.	Leniency?	Leniency Unsupport.	Percent Unsupport.
1991	57	10	0	0%	10	1	2%
1992	436	11	3	0.7%	20	4	1%
1993	112	2	0	0%	10	0	0%
1994	139	0	2	1%	7	2	1%
Total	744	23	5	1%	47	7	1%

Recommendation 18

18. Training and instructions to assessment teams should stress conditions necessary to warrant a rating of "Major."

Finding

Confusion about what constitutes a Good Management Practice (GMP) was common.

Background and Discussion

A GMP may be an organization policy or operating procedure that stems not from a regulatory requirement, but from organizational choice. Often it covers an issue or condition that is expected to be regulated in the near future or that is wise management to improve. GMPs may be judged as positive or negative. However, they cannot be considered deficiencies because they are not based on regulations. Although GMP is itself a rating, some GMPs were also rated as major and minor deficiencies; many were treated as noncompliance findings in the corrective action process. GMPs were included in some summary tables, but were omitted from report summaries in other instances. Some reports devoted a separate chapter to GMPs with a separate summary table.

Recommendations 19 & 20

19. Policy should be established defining the use, reporting, and treatment of a GMP.

20. Corrective actions for significant, major, and minor findings of noncompliance should take precedence over devoting time and resources to implementing GMPs.

Finding

A few findings rated GMP were actually regulatory findings of noncompliance.

Background and Discussion

A few GMPs were definitely regulatory findings of noncompliance (minor finding of noncompliance) misclassified. Additional GMPs were questionable regulatory findings as described (Table 23). Description given in the condition observed

was not clear enough in these instances to distinguish if finding was a GMP or a regulatory finding of noncompliance. A GMP rating should not be used as a lesser degree of a minor rating. A GMP is distinct from regulatory findings, although, like a regulatory finding, it may be negative or positive. In six instances, it was questionable that a negative GMP finding was justified because the condition as described suggested all was being managed well.

Table 23. Errors in rating of GMP.

Year	Number of GMPs	Regulatory	Percent Regulatory	Definite Regulatory	Percent Definite Regulatory	Negative	Percent Negative
1991	32	1	3%	0	0%	0	0%
1992	137	18	13%	8	6%	2	1%
1993	33	2	6%	1	3%	4	12%
1994	50	0	0%	2	4%	0	0%
Total	252	21	8%	12	5%	6	2%

Recommendation 21

21. Training and instructions to ERGO assessment teams should stress unique attributes of a GMP that distinguishes it from a regulatory finding of noncompliance.

Finding

Positive ratings were awarded for merely being in compliance.

Background and Discussion

Positive ratings are essential to a successful environmental compliance assessment program to recognize accomplishments and balance the negative aspect of findings of noncompliance. They should be awarded for actions that have exceeded compliance standards, in recognition of innovative solutions to old problems of noncompliance, and for proactive strategies for maintaining compliance. Using positive ratings for merely being in compliance reflects poorly on a program suggesting that the norm is something less than being in compliance. Conditions written for several positive ratings were questionable; in some instances a positive rating was not supported (Table 24).

Table 24. Errors in ratings of positive.

Year	Total Positive Ratings	Questionable	Unsupported	Percentage of Unsupported
1991	21	0	2	10%
1992	49	6	4	8%
1993	10	0	2	20%
1994	31	1	5	16%
Total	111	7	13	12%

Strongest showing for positive accomplishment and/or expertise to recognize accomplishment was in the Natural Resources protocol. Of the 111 findings made in Natural Resources, 12 were positive (11 percent) and all of them were well supported in their write-ups (Appendix K). At the other extreme, of the 174 findings made in Hazardous Waste, only 11 were positive and only 55 percent of the positive findings were well supported by information provided on the finding sheet.

Recommendations 22 & 23

22. Positive findings should be an integral part of ERGO assessments.

23. Training and instructions should cover standards for awarding positive ratings to ensure their correct and consistent use.

Finding

Positive findings occasionally were rated minor or major.

Background and Discussion

Adding a minor or major rating to a positive finding is extremely subjective and adds nothing to the purpose of having positive findings except potential for disagreement. Rating would use up assessor time that could be better spent.

Recommendation 24

24. Positive findings should not be rated.

Finding

New rating categories for findings were created by assessment teams.

Background and Discussion

Ratings of "neutral minor" and "neutral major" were used by a team. This rating was used when a finding was questioned and, apparently, some doubt existed. The addition of new local ratings or the changing of definitions jeopardizes consistency.

Recommendation 25

25. New rating categories should be prohibited unless approved by HQUSACE.

4 Evaluation of Corrective Actions

Corrective Action Plans

Corrective actions plans are critical to a successful environmental compliance assessment program. Unless an organization initiates corrective actions immediately after an assessment and tracks the actions until a state of compliance is met for each finding of noncompliance, performing a compliance assessment is not cost effective. Awareness of deficiencies with lack of serious purpose in correcting them increases an organization's vulnerability to notices of violation, fines, and negative public relations.

Finding

Some final reports lack complete corrective action plans.

Background and Discussion

Addressing the development of policy for corrective actions plans is difficult until completion of a large enough sample of baseline assessments to provide Corps organization with information on the extent, type, and cost of noncompliance issues. However, initiation and experimentation with the assessment process during ERGO Cycle I should have been accompanied with equal attention to the corrective action process. The number of corrective actions for findings of noncompliance do show a favorable trend increasing each year during Phase I (Table 25), but the goal should be as near 100 percent as possible. The smallest percent of corrective actions were for Solid Waste findings (39 percent); the largest percent of corrective actions were for Pesticide findings of noncompliance (67 percent) (Appendix L).

Table 25. Trend in corrective actions.

Assessment year	Number of Negative Findings	Number of Corrective Actions	Percentage
1991	243	70	29%
1992	804	392	49%
1993	248	136	57%
1994	347	245	71%

Recommendation 26

26. Firm policy should be issued that every finding of noncompliance must have a corrective action that is tracked until compliance is achieved.

Finding

Some corrective actions were vague; either no completion date had been cited, or a projected completion date was listed as several years in the future.

Background and Discussion

Vague corrective actions do not create an impression of serious intent. Projected dates for completion of corrective actions beyond 2 years, unless major construction or expenditure is involved, adds to this negative impression. When these two shortcomings are joined, resulting relationship (more vague a corrective action, the longer it takes to execute) does not suggest competence. No target date was provided for 22 percent of the corrective actions.

Corrective actions were examined and sorted into six groups (Table 26):

1. Corrective action completed and date of completion reported (CD).
2. No date given, but suggestion is that corrective action has been completed (SC).
3. Corrective action stated to be in progress or ongoing (ON).
4. Projected date given for completion of corrective action (PD).
5. No date given for described corrective action (ND).
6. Statement made that it had been determined that corrective action was unnecessary (AU).

Table 26. Grouping of corrective actions.

Yr	# CA	1 CD	% CD	2 SC	% SC	3 ON	% ON	4 PD	% PD	5 ND	% ND	6 AU	% AU
1991	59	26	44%	0	0%	3	5%	29	49%	0	0%	1	2%
1992	392	140	36%	17	4%	36	9%	64	16%	100	26%	35	9%
1993	136	30	22%	16	12%	6	4%	45	33%	37	27%	1	1%
1994	245	25	10%	54	22%	11	4%	100	41%	50	20%	7	4%
Total	832	221	27%	87	10%	56	7%	238	29%	187	22%	44	5%

Recommendations 27, 28, 29, and 30

27. If completed, corrective action closing date should be stated.

28. Projected completion date should be provided for ongoing and in-progress corrective actions.

29. Corrective actions scheduled for completion over 2 years in the future should contain sufficient information to justify protraction.

30. Policy should be established as to who has authority to determine that no corrective action is necessary because this determination voids an assessors finding of noncompliance.

Overview of Protocols

Analyses of finding write-ups, rating of findings, and corrective actions produced considerable information about each of the 12 protocols of the ERGO Phrase I assessments. To pool the information for each protocol, each protocol was ranked for six of the study elements: (1) well written findings, (2) sufficient information, (3) fewest criteria problems, (4) useful comments, (5) well supported ratings, and (6) corrective actions (Table 27). For example, UST (Underground Storage Tank) protocol had the highest percent of well written finding write-ups and was ranked first (1). When ties occurred, the same number was given to all protocols with the same rank. Consequently, Solid Waste Management protocol, which had the smallest percent of well written finding write-ups, ranked seventh.

Table 27. Protocol rankings.

Protocol	Well Written	Sufficient Information	Fewest Criteria Problems	Useful Comments	Supported Ratings	Corrective Actions
Air emissions	6	10	2	8	6	9
Cultural resources	6	1	9	9	3	2
Hazardous materials	2	4	7	10	3	7
Hazardous waste	4	10	3	5	8	4
Natural resources	4	2	5	7	4	5
Pesticides	6	5	4	2	2	1
Petroleum oil lubricants	5	9	5	11	5	3
Solid waste	7	10	6	6	7	10
Special pollutants	5	6	7	12	5	4
Underground storage tanks	1	8	8	4	1	8
Wastewater	4	7	10	3	5	10
Water quality	3	3	1	1	2	6

Each protocol has a different rating for most of the six elements. For example, Air Emissions has rankings of 6, 10, 2, 8, 6, and 3. By totaling the ranking for the six elements for each protocol and dividing by six, the average ranking was obtained (Table 28).

Table 28. Protocol rankings based on averages.

Protocol	Total of Six Ratings	Ranking Average
Water quality	16	2.7
Pesticides	20	3.3
Natural resources	27	4.5
Cultural resources	30	5.0
Underground storage tanks	30	5.0
Hazardous materials	33	5.5
Hazardous waste	34	5.7
Petroleum, oils, lubricants	38	6.3
Special pollutants	39	6.5
Wastewater	39	6.5
Air emissions	41	6.8
Solid waste	46	7.7

Results suggest that the ERGO program is strongest in water quality, pesticides, and natural resources because these protocols had the most consistent high rankings for elements considered. Clustering of the averages shows that no protocol was consistently poor, because rankings varied from element to element. Perhaps this clustering of averages can be considered a good sign that assessments are being done well overall. If solid waste, which has the lowest ranking (7.7), instead had an average around 11, a distinct problem would be indicated for that protocol Corps-wide.

5 Analysis of Report Format and Content

Format and Content

Finding

Report covers could be more informative.

Background and Discussion

Many reports examined did not have covers, possibly because they were copies. Examination of covers, or headings on reports without covers, showed some divergence in amount and type of information provided. Trends reflected in the information presented on covers and front page headings suggest including the name of the district has been found to be useful (Table 29). In the final year of Phase I, the practice of including the state of the project or facility assessed became more common (56 percent).

Table 29. Information on report covers.

Year	ERGO ID	% ID	Site Name	% Site	State	% State	District	% District
1991	5	71%	6	86%	1	14%	4	57%
1992	9	69%	11	85%	2	15%	7	54%
1993	4	80%	4	80%	0	0%	4	80%
1994	7	78%	8	89%	5	56%	7	78%
Total	25	74%	29	85%	8	24%	22	65%

Of the 26 reports submitted with covers, all but one of them included a date and two of them had two dates. The problem is identifying what event in the ERGO process the date reflects. Greatest confusion occurs in the use of the term "final report." In some instances, the term refers to a final report of the assessment findings and in other instances, it denotes a final report encompassing assessment findings and corrective actions (Table 30). Fortunately, there is a positive trend towards identifying cover dates. However, most reports had to be studied to identify significance of the date on the cover (Appendix M). An ideal cover for a final report that includes corrective actions would probably contain several identified dates (Appendix N).

Table 30. Identification of dates on report covers.

Year	Reports with Covers	Date Identified Assessment	Possible Assessment	Date Identified CAP	Date Identified Final	Possible Final
1991	4	0	1	0	0	3
1992	9	2	1	0	3	2
1993	*5	0	0	2	1	2
1994	*8	1	1	2	3	1
* More than one date per cover						

Recommendations 31 & 32

31. At a minimum, the report cover should identify ERGO, the project and facility name, and the district.

32. Date(s) on report should be identified as to the stage in the ERGO process to which they belong.

Finding

Final ERGO reports vary greatly in format and content.

Background and Discussion

HQUSACE does not require a standard report format. The majority of reports used actual finding sheets as report chapter pages on findings of noncompliance. Other reports incorporated findings sheets as an appendix and wrote up findings of noncompliance in a format similar to fact sheets. A few reports presented findings in a text format without providing finding sheets for reference. In one case, information was omitted to the extent that only a vague mention of noncompliance remained in the text. Corrective action plans, when included, were sometimes a separate chapter, a separate document, or an addition to the original finding sheet. If a final report is requested through the Freedom of Information Act (FOIA), an organization wants to see a clear indication that a finding of noncompliance has been corrected or is scheduled to be corrected in a reasonable amount of time.

Recommendations 33 & 34

33. Well designed finding sheets could be used as the report section/chapter on findings of noncompliance because this has been successfully demonstrated to be an efficient format.

34. Corrective actions should be incorporated on the finding sheet.

Finding

Personal names were included in final reports.

Background and Discussion

Several reports included an assignment of responsibility, especially for corrective action, using office designations, but a few reports mentioned personal names. Final ERGO reports can be requested by any person or organization under the Freedom of Information Act. Singling out an individual may make them vulnerable to reactionaries. Using an office designation avoids this problem, but clearly denotes responsibility within the organization for correcting a finding of noncompliance.

Recommendation 35

35. Assign responsibility for corrective actions using impersonal office designations.

Finding

Reports done by contractors are frequently verbose.

Background and Discussion

Many reports done by contractors demonstrate excellent technical knowledge in identifying and writing findings, but sometimes lack the insight Corps assessors have for details specific to Corps compliance problems.

Recommendations 36 & 37

36. Include at least one Corps person on a contract assessment team, if possible.

37. Evaluation and monitoring of contractor assessments should discourage listings of "quantity," which are repetitious and tend to obscure priorities for corrective action.

Finding

Pictures included in reports frequently had insufficient captions, making it difficult or impossible to identify the condition(s) of noncompliance represented.

Background and Discussion

A few reports included colored pictures of findings of noncompliance in an appendix. However, lack of labels and incompleteness in description diminished their usefulness. One school of thought is that photographing adds tension to the assessment process and may curtail responsiveness during the interview process. Instead of an atmosphere of support, the use of photographs sets a tone of critical inspection. Another school of thought is that a picture clarifies the finding of noncompliance and promotes management attention to corrective action.

Recommendation 38

38. Labeling and description of photographs should be required to justify the time and expense invested in them.

6 Conclusion and Recommendations

This analysis evaluated a sample of ERGO Cycle I assessment and correction action reports from throughout the Corps to identify process and product strengths and weaknesses, and made recommendations that will improve the consistency and effectiveness of succeeding ERGO Cycles.

It is recommended that the Corps of Engineers establish minimal policy and guidance necessary to improve the consistency of the ERGO process, but continue to avoid an elaborate reporting process. The organization should demonstrate a commitment to tracking corrective actions until their completion to decrease vulnerability from outside inspections, enforcement actions, and negative publicity. Future training should concentrate on weaknesses identified that should have positive results in the field and for ERGO Cycle II. Specific recommendations are that:

1. Attention to writing condition(s) observed for a finding should continue to focus on clarity and factual information.

2. Finding conditions should include sample size, descriptions of amounts, and other indicators of the extent of the condition of noncompliance.

3. Designated team chief of the ERGO assessment team should stress the importance of sufficient information in finding conditions and check early in the assessment to see if appropriate information is being included.

4. Instructions to assessors should stress the importance of entering specific site locations on finding sheets.

5. Every finding of noncompliance should include citation(s) of statutory/-regulatory criteria used as the basis for the finding.

6. Every finding of noncompliance should include pertinent text of statutory/-regulatory citation used as the criterion or, if too lengthy, a paraphrase to illustrate the reason for the finding.

7. If the criteria has more than one citation, the text of citation with greatest priority should be included in its entirety, or should be well paraphrased.

8. Policy should be established as to priority assigned to criteria, such as: (a) Federal regulation, (b) State regulation, (c) Engineering regulation, (d) DOD Directive, (e) Engineering Manual, or some other similar scheme.

9. Continue the practice of soliciting optional comments.

10. Emphasize the value added to the assessment for project/facility managers when comments give specific directions, provide advice, and share expertise.

11. The designated team chief of an ERGO assessment team should check for any pattern of errors and try to assist team members needing guidance early in the assessment.

12. Policy decision should be made on maintaining or discarding the practice of using Engineering Manuals as criteria for noncompliance findings.

13. The seriousness of rating should be thoroughly and clearly supported in the finding condition.

14. The ERGO team chief should check for consistency in application of the rating system.

15. Special attention should be applied to rating hazardous waste, solid waste, and wastewater findings during training sessions.

16. Guidance should be issued emphasizing the seriousness of a significant rating and importance of a strong, clear, supporting condition.

17. Training should address the responsible use of a significant rating and provide examples.

18. Training and instructions to assessment teams should stress conditions necessary to warrant a rating of "Major."

19. Policy should be established defining the use, reporting, and treatment of a "Good Management Practice" (GMP).

20. Corrective actions for significant, major, and minor findings of noncompliance should take precedence over devoting time and resources to implementing GMPs.

21. Training and instructions to ERGO assessment teams should stress unique attributes of a GMP that distinguish it from a regulatory finding of noncompliance.

22. Positive findings should be an integral part of ERGO assessments.

23. Training and instructions should cover standards for awarding positive ratings to ensure their correct and consistent use.

24. Positive findings should not be rated.

25. New rating categories should be prohibited unless approved by HQUSACE.

26. Firm policy should be issued stating that every finding of noncompliance must have a corrective action that is tracked until compliance is achieved.

27. If completed, corrective action closing date should be stated.

28. Projected completion date should be provided for ongoing and in-progress corrective actions.

29. Corrective actions scheduled for completion over 2 years in the future should contain sufficient information to justify protraction.

30. Policy should be established that specifies who had authority to determine that no corrective action is necessary because this determination voids an assessors finding of noncompliance.

31. At a minimum, report cover should identify ERGO, project or facility name, and district.

32. Date(s) on report should be identified as to stage in ERGO process.

33. Well designed finding sheets could be used as the report section/chapter on findings of noncompliance because this has been successfully demonstrated to be an efficient format.

34. Corrective actions should be incorporated on the finding sheet.

35. Assign responsibility for corrective actions using impersonal office designations.

36. Include at least one Corps person on a contract assessment team, if possible.

37. Evaluation and monitoring of contractor assessments should discourage "quantity," which is repetitious and tends to obscure priorities for corrective action.

38. Labeling and description of photographs should be required to justify time and expense invested in them.

Appendix A: Evaluation Sheet Elements

Design of the evaluation sheet used for each report included the following elements:

- Corps District
- Project or Facility
- Location of Site
- Outgrant Sites
- Date of Assessment
- Date of Corrective Action Plan
- Date of Final Assessment Report
- Cover Type
- Manual Used
- Number of Protocols Assessed
- Team Size
- Report Index
- Executive Summary
- Objectives of Assessment
- Summary Table of Findings
- Separate Chapter for Good Management Practices

- Corrective Action Plan
- Signature Sheet Including Titles of Signers and Dates of Signatures
- Number of Significant Findings Based on Federal Regulations
- Number of Significant Findings Based on Engineering Regulations
- Number of Significant Findings Based on State Regulations
- Number of Major Findings Based on Federal Regulations
- Number of Major Findings Based on Engineering Regulations
- Number of Major Findings Based on State Regulations
- Number of Minor Findings Based on Federal Regulations
- Number of Minor Findings Based on Engineering Regulations
- Number of Minor Findings Based on State Regulations
- Number of Negative Good Management Findings
- Number of Positive Findings
- Evaluation of Finding Write-ups
- Condition Statements
- Criteria Correctness and Completeness
- Comment Value
- Appropriateness of Ratings
- Corrective Actions

Appendix B: Coding for Major Heading Elements

Coding was created for each of the major headings of the evaluation design as follows:

Comments

CIF = Comment Included in Finding Condition

P = Poor (Misleading or Incorrect)

U = Useful

Corrective Actions

CAA = Completed Action During Assessment

CD = Completion Date

CDD = Completion Date Day

CDM = Completion Date Month

CDY = Completion Date Year

DNAN = Determined No Action Necessary

NA = Not Appropriate

ND = Not Date for Corrective Action

NDSAC = No Date Suggest Action Completed

ON = Ongoing, Corrective Action in Progress

PD = Projected Date for Completion of Corrective Action

PDD = Projected Date Day

PDM = Projected Date Month

PDY = Projected Date Year

VND = Vague Corrective Action and No Date

Criteria

IC = Incomplete Criteria

NC = No Criteria

NCIT = No Citation

PC = Poor Criteria

Findings

CFI = Combined Findings Incorrectly

II = Insufficient Information

IIss = Insufficient Information on sample size

NSL = No Site Location

OVL = Overlap in findings

PWF = Poorly Written Finding

PWFr = Poorly Written Finding rambles

Ratings

DU = Disagree Rating Should Be More Severe

DD = Disagree Rating Should Be Less Severe

NF = Not a Finding of Noncompliance

NP = Not a Positive Finding

NR = No Rating

PN = Positive Rated as Negative

RMP = Rating of Good Management Practice

UMP = Used Management Practice as a Rating

US = Unsupported by Condition Described

?D = Question Rating Too Severe

?NF = Question Finding of Noncompliance

?NP = Question Positive Finding

?U = Question Rating Not Severe Enough

Appendix C: Information Included on a Finding Sheet

Example of information included on a finding sheet.

ERGO INDIVIDUAL FINDING SHEET

Project: Clear River, Oregon **Manual Edition:** April 93

Section: Hazardous Waste **Question Number:** 4-5

Type of Finding: Negative **Rating:** Major

Location: Maintenance Trailer **Repeat Finding:** No

Basis of Finding: 40 CFR 261/262

Condition: Two 5- gallon cans containing 2,4-D or related compound and two 2.5-gallon pesticide containers have been abandoned behind the trailer. The containers have been exposed to the elements for a substantial amount of time. One of the 2,4-D cans has a small hole in the lid.

Criteria: Hazardous waste must be properly identified, managed, and disposed.

Prepared by: **Date:**

Comments: Transfer to new containers and use as labels instruct, or put in proper containers as a hazardous waste for proper storage, transportation, and disposal.

Corrective Action: Transferred material to proper container. Took to District #4 Shop for proper storage.

Responsible for Correction: Clear River Project Office

Date of Correction: 02-17-95

Appendix D: Protocols and Years With Poorly Written Findings

List of protocols and years with poorly written findings; number of poorly written findings expressed as a percentage of total number of written findings for year. Years not included had no poorly written findings.

Protocol	Year	Number of Findings	Number Poorly Written	Percent
Air Emissions	1991	10	1	10%
	1992	31	3	10%
Cultural Resources	1992	52	5	10%
	1994	22	2	9%
Hazardous Materials	1991	28	1	4%
	1992	163	10	6%
	1994	76	2	3%
Hazardous Waste	1991	10	1	10%
	1992	94	16	17%
	1993	34	3	9%
	1994	36	1	3%
Natural Resources	1992	70	11	16%
	1994	25	1	4%
Pesticides	1992	109	14	13%
Petroleum Oil Lubricants	1991	28	1	4%
	1992	127	11	9%
	1994	72	3	4%
Solid Waste	1991	14	1	7%
	1992	69	3	4%
	1993	20	1	5%
	1994	32	2	6%
Special Pollutants	1992	26	2	8%
	1994	12	1	8%
Underground Storage Tanks	1994	22	1	5%
Wastewater	1994	19	1	5%
Water Quality	1992	39	2	5%
	1994	18	1	6%

Appendix E: Protocols and Years With Exceptionally Well Written Findings

Protocols and years with exceptionally well written findings; number of well written findings expressed as a percentage of number of total written findings for year.

Protocol	Year	Number of Findings	Number Well Written	Percent
Air Emission	1991	10	3	30%
	1992	31	2	6%
	1994	11	1	9%
Cultural Resources	1991	16	8	50%
	1992	52	2	4%
	1993	16	1	6%
	1994	22	1	5%
Hazardous Materials	1991	28	9	32%
	1992	163	29	18%
	1993	55	7	13%
	1994	76	14	18%
Hazardous Waste	1991	10	1	10%
	1992	94	9	10%
	1993	34	11	32%
	1994	36	4	11%
Natural Resources	1991	11	7	64%
	1992	70	4	8%
	1994	25	4	16%
Pesticides	1991	15	2	13%
	1992	109	10	9%
	1993	44	5	11%
	1994	33	6	18%
Petroleum Oil Lubricants	1991	28	7	25%
	1992	127	15	12%
	1993	35	6	17%
	1994	72	5	7%
Solid Waste	1991	14	7	50%
	1992	69	4	6%
	1993	20	2	10%
	1994	32	1	3%
Special Pollutants	1991	9	1	11%
	1992	26	2	8%

Protocol	Year	Number of Findings	Number Well Written	Percent
Underground Storage Tanks	1992	20	10	50%
	1993	14	4	29%
	1994	22	3	14%
Wastewater	1991	10	2	20%
	1992	53	7	13%
	1993	4	1	25%
	1994	19	2	11%
Water Quality	1991	9	3	33%
	1992	39	5	13%
	1994	18	3	17%

Appendix F: Finding Conditions With Insufficient Information According to Protocol

Finding conditions with insufficient information according to protocol; number of findings with insufficient information expressed as a percentage of negative findings.

Air Emissions—Cultural Resources

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
9	4	9% 1991	16	0	0% 1991
30	1	3% 1992	51	3	6% 1992
10	8	80% 1993	16	0	0% 1993
11	2	18% 1994	22	1	5% 1994

Hazardous Materials—Hazardous Waste

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
27	2	7% 1991	9	1	10% 1991
152	23	15% 1992	88	31	35% 1992
53	9	17% 1993	33	3	9% 1993
71	8	11% 1994	33	5	15% 1994

Natural Resources—Pesticides

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
11	1	9% 1991	14	6	43% 1991
65	3	15% 1992	103	17	17% 1992
5	1	20 % 1993	43	7	16% 1993
18	0	0% 1994	33	0	0% 1994

Petroleum Oil Lubricants—Solid Waste

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
24	3	13% 1991	13	2	15% 1991
116	18	16% 1992	68	14	21% 1992
32	11	34% 1993	18	9	50% 1993
69	25	36% 1994	27	7	26% 1994

Special Pollutants—Underground Storage Tanks

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
9	2	22% 1991	16	8	50% 1991
22	6	27% 1992	19	1	5% 1992
8	1	13% 1993	14	4	29% 1993
11	0	0% 1994	21	1	5% 1994

Wastewater—Water Quality

Negative Findings	Insufficient Information	Percentage for Year	Negative Findings	Insufficient Information	Percentage for Year
10	1	10% 1991	9	2	22% 1991
52	9	17% 1992	38	5	13% 1992
3	1	33% 1993	5	1	20% 1993
16	4	25% 1994	15	0	0% 1994

Appendix G: Criteria Problems According to Protocol

Criteria problems according to protocol; number of criteria problems expressed as a percentage of negative findings for each year.

Air Emissions—Cultural Resources

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
9	0	0% 1991	16	8	50% 1991
30	1	3% 1992	51	4	8% 1992
10	0	0% 1993	16	0	0% 1993
11	2	18% 1994	22	7	32% 1994

Hazardous Materials—Hazardous Waste

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
27	9	33% 1991	9	1	9% 1991
152	13	9% 1992	88	3	3% 1992
53	5	9% 1993	33	3	9% 1993
71	4	6% 1994	33	2	6% 1994

Natural Resources—Pesticides

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
11	1	9% 1991	14	1	7% 1991
65	3	5% 1992	103	2	2% 1991
5	0	0% 1993	43	3	7% 1992
18	4	22% 1994	33	8	24% 1993

Petroleum Oil Lubricants—Solid Waste

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
24	4	17% 1991	13	4	31% 1991
116	8	7% 1992	68	2	3% 1992
32	2	6% 1993	18	1	6% 1993
69	5	7% 1994	27	4	15% 1994

Special Pollutants—Underground Storage Tanks

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
9	2	22% 1991	16	2	13% 1991
22	1	5% 1992	19	0	0% 1992
8	0	0% 1993	14	0	0% 1993
11	2	18% 1994	21	7	33% 1994

Wastewater—Water Quality

Negative Findings	Criteria Problems	Percentage for Year	Negative Findings	Criteria Problems	Percentage for Year
10	1	10% 1991	9	2	22% 1991
52	7	13% 1992	38	1	3% 1992
3	0	0% 1993	5	0	0% 1993
16	7	44% 1994	15	0	0% 1993

Appendix H: Comments Totaled for Each Protocol

Comments totaled for each protocol for four years of assessments expressed as a percentage of total findings for the protocol. Useful comments totaled for each protocol for 4 years of assessments expressed as a percentage of total comments for the protocol.

Protocol	Comments/ Findings	Percent	Useful Comments /Comments	Percent
Water Quality	25/71	35%	21/25	84%
Pesticides	68/201	34%	49/68	72%
Wastewater	41/86	48%	25/41	61%
UST	34/72	47%	20/34	59%
Hazardous Waste	66/174	38%	37/66	57%
Solid Waste	44/135	33%	24/44	55%
Natural Resources	34/111	31%	18/34	53%
Air Emissions	28/62	45%	14/28	50%
Cultural Resources	47/106	44%	22/47	47%
Haz. Materials	138/322	43%	62/138	45%
POL	119/262	45%	51/119	43%
Special Pollutants	26/55	47%	8/26	31%

Appendix I: Questionable and Unsupported Ratings by Protocol

Questionable and unsupported ratings by protocol expressed as a percent of total findings.

Air Emissions

Year	Findings	Questionable Ratings	Percentage	Unsupported Ratings	Percentage
1991	10	1	10%	0	0%
1992	31	3	10%	1	3%
1993	10	7	70%	1	10%
1994	11	0	0%	2	18%
Total	62	11	18%	4	6 %

Cultural Resources

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	16	2	13%	4	33%
1992	52	2	4%	2	4%
1993	16	0	0%	0	0%
1994	22	3	14%	2	9%
Total	106	7	7%	8	8%

Hazardous Materials

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	28	1	4%	0	0%
1992	163	16	10%	10	6%
1993	55	7	13%	6	11%
1994	76	3	4%	6	8%
Total	322	27	8%	22	7%

Hazardous Waste

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	10	0	0%	1	10%
1992	94	19	20%	2	2%
1993	34	3	9%	0	0%
1994	36	2	6%	9	25%
Total	174	24	18%	12	7%

Natural Resources

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	11	1	9%	0	0%
1992	70	11	16%	5	7%
1993	5	0	0%	0	0%
1994	25	0	0%	1	4%
Total	111	12	11%	6	5%

Pesticides

Year	Findings	Questionable Findings	Percent	Unsupported Findings	Percent
1991	15	2	13%	0	0%
1992	109	11	10%	3	3%
1993	44	6	14%	1	2%
1994	33	1	3%	0	0%
Total	201	20	10%	4	2%

Petroleum Oil Lubricants

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	28	3	11%	1	4%
1992	127	19	15%	1	1%
1993	35	5	14%	1	3%
1994	72	17	24%	10	14%
Total	262	44	17%	13	5%

Solid Waste

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	14	0	0%	0	0%
1992	69	16	23%	5	7%
1993	20	2	10%	1	5%
1994	32	6	19%	7	22%
Total	135	24	18%	13	10%

Special Pollutants

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	9	0	0%	1	11%
1992	26	7	27%	1	4%
1993	8	0	0%	0	0%
1994	12	1	8%	2	17%
Total	55	8	15%	4	7%

Underground Storage Tanks

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	16	2	13%	0	0%
1992	20	1	5%	0	0%
1993	14	1	7%	0	0%
1994	22	2	9%	0	0%
Total	72	6	8%	0	0%

Wastewater

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	10	0	0%	0	0%
1992	53	6	11%	3	6%
1993	4	1	25%	0	0%
1994	19	5	26%	4	21 %
Total	86	12	14%	7	8%

Water Quality

Year	Findings	Questionable Ratings	Percent	Unsupported Ratings	Percent
1991	9	1	11%	0	0%
1992	39	5	13%	1	3%
1993	5	1	20%	0	0%
1994	18	1	6%	0	0%
Total	71	8	11%	1	1%

Appendix J: Major Ratings Examined and Correctly Rated by Protocol as Too Severe

Major ratings examined by protocol as too severe (questionable and unsupported) and correctly (justified) rated.

Evaluation of Majors Ratings

Protocol	Major Ratings	Severity?	Severity? %	Not Supported	Not Supp. %	Justified	Justified %
Air Emissions	17	8	47%	2	12%	7	41%
Cultural Resources	39	2	5%	0	0%	37	95%
Hazardous Materials	112	18	16%	11	10%	83	74%
Hazardous Waste	56	15	27%	2	4%	39	70%
Natural Resources	22	4	18%	3	14%	15	68%
Pesticides	62	6	10%	1	2%	55	89%
Petroleum Oil Lubricants	99	28	28%	5	5%	66	67%
Solid Waste	54	17	31%	7	13%	30	56%
Special Pollutants	12	2	17%	2	17%	8	67%
Underground Storage Tanks	34	1	3%	0	0%	33	97%
Wastewater	36	2	6%	1	3%	33	92%
Water Quality	25	0	0%	0	0%	23	92%
Total	568	103	18%	34	6%	429	76%

Appendix K: Total Positive Findings Made for Each Protocol

Total positive findings made for each protocol with number and percentage of questionable and unsupported positive findings.

Air Emissions

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	1	0	0%	0	0%
1992	1	0	0%	0	0%
1993	0	0	0%	0	0%
1994	0	0	0%	0	0%
Total	2	0	0%	0	0%

Cultural Resources

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	1	0	0%	0	0%
1993	0	0	0%	0	0%
1994	0	0	0%	0	0%
Total	1	0	0%	0	0%

Hazardous Materials

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	1	0	0%	0	0%
1992	11	1	9%	1	9%
1993	2	0	0%	0	0%
1994	5	0	0%	1	20%
Total	19	1	5%	2	11%

Hazardous Waste

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	1	0	0%	1	100%
1992	6	0	0%	2	33%
1993	1	0	0%	0	0%
1994	3	0	0%	2	67%
Total	11	0	0%	5	45%

Natural Resources

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	5	0	0%	0	0%
1993	0	0	0%	0	0%
1994	7	0	0%	0	0%
Total	12	0	0%	0	0%

Pesticides

Year	Positive Findings	Questionable Findings	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	1	0	0%	0	0%
1992	6	1	17%	0	0%
1993	1	0	0%	1	100%
1994	0	0	0%	0	0%
Total	8	1	13%	1	13%

Petroleum Oil Lubricants

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	4	0	0%	1	25%
1992	11	0	0%	1	9%
1993	3	0	0%	1	33%
1994	3	0	0%	0	0%
Total	21	0	0%	3	14%

Solid Waste

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	1	0	0%	0	0%
1992	1	0	0%	0	0%
1993	2	0	0%	0	0%
1994	5	0	0%	0	0%
Total	9	0	o%	0	0%

Special Pollutants

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	4	3	75%	0	0%
1993	0	0	0%	0	0%
1994	1	0	0%	1	100%
Total	5	3	60%	1	20%

Underground Storage Tanks

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	1	0	0%	0	0%
1993	0	0	0%	0	0%
1994	1	0	0%	0	0%
Total	2	0	0%	0	0%

Waste Water

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	1	1	100%	0	0%
1993	1	0	0%	0	0%
1994	3	0	0%	1	33%
Total	5	1	20%	1	20%

Water Quality

Year	Positive Findings	Questionable Positives	Percent Questionable	Unsupported Positives	Percent Unsupported
1991	0	0	0%	0	0%
1992	1	1	100%	0	0%
1993	0	0	0%	0	0%
1994	3	1	33%	0	0%
Total	4	2	50%	0	0%

Appendix L: Negative Findings and Corrective Actions Listed by Protocol and Year

Negative findings and corrective actions listed by protocol and year with percentage of negative findings having corrective actions.

Air Emissions—Cultural Resources

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
9	1	11% 1991	16	9	56% 1991
30	11	37% 1992	51	26	51% 1992
10	15	50% 1993	16	16	100% 1993
11	8	73% 1994	22	17	77% 1994
60	25	42% Phase I	105	68	65% Phase I

Hazardous Materials—Hazardous Waste

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
27	7	26% 1991	9	2	22% 1991
152	67	44% 1992	88	44	50% 1992
53	18	34% 1993	33	20	61% 1993
71	54	76% 1994	33	26	79% 1994
303	146	48%	163	92	56%

Natural Resources—Pesticides

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
11	7	64% 1991	14	4	29% 1991
65	32	49% 1992	103	65	63% 1991
5	4	80% 1993	43	33	77% 1992
18	8	44% 1994	33	27	82% 1993
99	51	52%	193	129	67%

Petroleum Oil Lubricants—Solid Waste

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
24	9	38% 1991	13	2	15% 1991
116	61	53% 1992	68	28	41% 1992
32	25	78% 1993	18	3	17% 1993
69	47	68% 1994	27	16	59% 1994
241	142	59%	126	49	39%

Special Pollutants—Underground Storage Tanks

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
9	4	44% 1991	16	6	38% 1991
22	13	59% 1992	19	8	42% 1992
8	2	25% 1993	14	5	36% 1993
11	9	82% 1994	21	13	62% 1994
50	28	56	70	32	46%

Wastewater—Water Quality

Negative Findings	Corrective Actions	Percentage for Year	Negative Findings	Corrective Actions	Percentage for Year
10	6	60% 1991	9	2	22% 1991
52	16	31% 1992	38	21	55% 1992
3	2	67% 1993	5	3	60% 1993
16	13	81% 1994	15	7	47% 1993
81	37	46%	67	33	49%

Appendix M: Information Included on Report Covers

Various types of information on report covers (when submitted) or headings of the first page of the report were listed and tabulated.

No Cover	ERGO Initials	ERGO Written Out	Project or Facility Name	State Location of Site	CORPS District	Year and Report
						1991
x			x			1
		x	x		x	2
x	x		x			3
	x	x			x	4
x	x		x			5
	x	x	x		x	6
			x	x	x	7
3	4	3	6	1	4	Total
						1992
	x	x	x		x	1
x			x		x	2
x	x					3
x			x			4
	x	x				5
	x	x	x			6
			x	x	x	7
	x	x	x			8
			x		x	9
	x	x	x		x	10
	x	x	x	x	x	11
	x	x	x			12
x	x		x		x	13
4	9	7	11	2	7	Total
						1993
		x			x	1
	x	x	x			2
			x		x	3
	x	x	x		x	4
	x	x	x		x	5
0	3	4	4	0	4	Total

No Cover	ERGO Initials	ERGO Written Out	Project or Facility Name	State Location of Site	CORPS District	Year and Report
						1994
x						1
	x	x	x	x	x	2
		x	x		x	3
	x	x	x		x	4
			x	x	x	5
	x		x		x	6
	x	x	x	x		7
	x		x	x	x	8
	x	x	x	x	x	9
1	6	5	8	5	7	Total
						1991
x						1
					x	2
	x					3
		x				4
	x					5
				x		6
				x		7
1	2	1	0	2	1	Total
						1992
				*x		1
x						2
x						3
x						4
		*x				5
				x		6
x						7
				x		8
	x					9
	*x					10
				x		11
				*x		12
	*x					13
4	3	1	0	5	0	Total
						1993
				x		1
			*x			2
x						3
			*x		*x	4
				x		5
1	0	0	2	2	1	Total
						1994

No Cover	ERGO Initials	ERGO Written Out	Project or Facility Name	State Location of Site	CORPS District	Year and Report
x						1
	*x					2
	x					3
				*x		4
			*x		*x	5
				x		6
x						7
				x		8
				*x		9
2	2	0	1	4	1	Total

Appendix N: Sample Final Report Cover with Identified Dates

Environmental Review Guide

for Operations

ERGO

Clear River Project Office

Oregon

Western District

Project Assessment: 13 - 17 May 1996

Corrective Action Plan: 26 June 1996

Final Report: 1 August 1996

USACERL DISTRIBUTION

Chief of Engineers
ATTN: CECW-OA (10)

Defense Tech Info Center 22060-6218
ATTN: DTIC-O (2)

12
5/97